



Hamilton

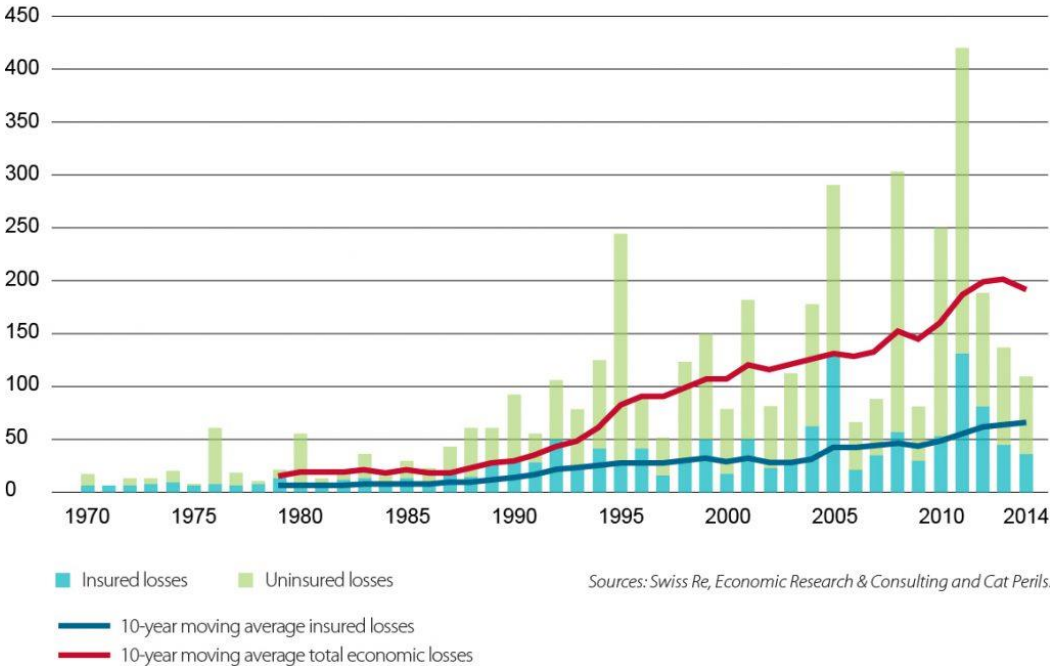
# CROPS AND CLIMATE

June 21, 2018

# Flood is the New Fire

“Even if we’re having just a little more rain than we used to, the water ends up in basements and flooding roadways, flooding parks. The weather is changing, we are seeing more rain events more often. That combined with increased development, infrastructure that’s aging, us paving over areas that used to be able to soak up the water — the result is more (flood) events and bigger losses, too.”  
(Shawna Peddle, Partners for Action)

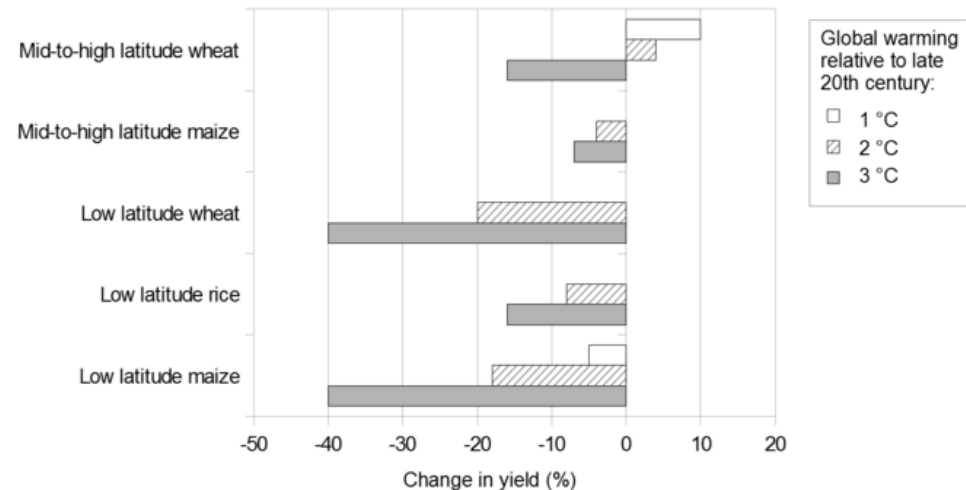
**INSURED VS UNINSURED LOSSES** (in USD billion in 2014 prices)



# Farms will benefit though ... right?

In the short term ... maybe

- Longer and warmer growing season
- More extreme weather events, including floods
- More droughts, particularly in summer
- More pests
- Less predictability overall



In the long term ... probably not

- In low-latitude countries, agricultural yields are already in decline from climate change

# Local Impacts

- 3% increase in precipitation since 1970
- Local increases in flooding events, ice storms, wind storms, extreme rain events
- 2016 drought followed by 2017 floods along Lake Ontario



# Future Local Impacts

- An annual Increase in temperatures of approximately 1.5°C in the 2020s, 3.0°C in the 2050s, and 4.8°C in the 2080s.
- Changes in precipitation with annual precipitation days of 118 increasing to 126 days in the 2020s, 132 days in the 2050s, and 137 days in the 2080s.



# Future Local Impacts

- Intensity, duration, and frequency of extreme weather events, such as heavy rain events, ice storms, and windstorms, are expected to increase over the next century.
- An increase in the frequency of heat days ( $>30^{\circ}\text{C}$ ) and warm nights of 20 days in the 2020s, 33 days in the 2050s, and 48 days in the 2080s.



# Hamilton's Adaptation Planning

- Began corporately in 2015
- Expanded to the community in 2017
- What we asked:
  - What changes or impacts are of concern to you?
  - How do you think you, your family, your community will be affected?
  - Do you have the resources to deal with it?

# Adaptation Planning and Hamilton's Farmers

## Community Feedback:

1. Food Security (particularly for low-income families)
2. Local Food Security (resilience to outside droughts etc.)
3. Important element in Hamilton's Community Climate Change Action Plan
4. Economic impacts
- 5. Impacts to farmers!**



Taking Action on Climate Change in  
Hamilton – A Community Plan



We need Hamilton's farmers!





Hamilton

THANK YOU